WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a semiconductor substrate having a main surface;

a semiconductor element formed on said main surface;

an interlayer insulating film having a top surface and a peripheral edge extending from said top surface to said main surface, and formed on said main surface to cover said semiconductor element, wherein in said interlayer insulating film, strip-like first and second groove portions are formed to be placed between said semiconductor element and said peripheral edge, to extend in parallel with said main surface and to extend in a predetermined direction at a spacing with each other, and a plurality of third groove portions are formed to diverge from said first and second groove portions and to extend in a direction different from an extending direction of said first and second groove portions; and

a metal filling said first, second and third groove portions.

2. The semiconductor device according to claim 1, wherein said third groove portion is formed between said first groove portion and said second groove portion.

3. The semiconductor device according to claim 1, wherein said third groove portion links said first groove portion and said second groove portion.

4. The semiconductor device according to claim 1, wherein said first, second and third groove portions reach said main surface from said top surface.

5. The semiconductor device according to claim 1, wherein said first and second groove portions are formed along said peripheral edge to surround a region where said semiconductor element is formed.

6. The semiconductor device according to claim 1, wherein said interlayer insulating film includes first and second portions of different types from each other and successively formed on said main surface.

7. A semiconductor device comprising:

a semiconductor substrate having a main surface;

a semiconductor element formed on said main surface;

an interlayer insulating film having a top surface and a peripheral edge extending from said top surface to said main surface, and formed on said main surface to cover said semiconductor element, wherein in said interlayer insulating film, strip-like first and second groove portions are formed to be placed between said semiconductor element and said peripheral edge, to extend in parallel with said main surface and to extend to cross each other at predetermined spacing; and

a metal filling said first and second groove portions.

8. The semiconductor device according to claim 7, wherein said first and second groove portions reach said main surface from said top surface.

9. The semiconductor device according to claim 7, wherein said first and second groove portions are formed along said peripheral edge to surround a region where said semiconductor element is formed.

10. The semiconductor device according to claim 7, wherein said interlayer insulating film includes first and second portions of different types from each other and successively formed on said main surface.